



Town of Chester, Connecticut

2016 Annual Report

Stormwater Management Plan

**General Permit for the Discharge of Stormwater from Small
Municipal Separate Storm Sewer Systems**

Permit Number GSM000058

Draft

**General Permit for the Discharge of Stormwater from Small Municipal Separate Storm
Sewer Systems**

2016 MS4 Stormwater Management Plan Annual Report

Town of Chester, Connecticut

Permit Number GSM000058

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A pdf of the Town of Chester MS4 General Stormwater Permit Stormwater Management Plan will be made available for public review and comment on the Town of Chester website to meet FOI requirements.

The MS4 General Stormwater Permit 2016 Annual Report will be mailed to the CTDEEP after the 2016 Annual Report has been made available for public review and comment for at least 30 days to meet FOI requirements.

It is also anticipated that the Town of Chester MS4 General Stormwater Permit Stormwater Management Plan for the modified MS4 General Stormwater Permit, Effective July 1, 2017 will

be made available for public inspection and printing before April 1, 2017 to meet FOI requirements.

April 29, 2016 CTDEEP 2014 MS4 General Permit Compliance Review

Lauren Gister, First Selectwoman received a MS4 General Permit Compliance Review Letter dated April 29, 2016, from Kim Hudak, P.E. Assistant Director of the CTDEEP Water Permitting & Enforcement Division. The compliance review was based on the review of the 2014 Annual Report. Each of the six Minimum Control Measures (MCM) tasks received rankings from 1 denoting Poor to 5 denoting Excellent. The town received an average rating of 2.4 which was considered Fair. No MCM task lacked a rating

In review of the permit compliance review letter it was noted that once a MCM task is completed and reported in the annual report is should remain in the annual reports through the duration of the permit as the preparer assumed each annual report was reviewed and removed the MCM task from the annual report once completed. Moving forward the annual report will be a compilation with most recent tasks listed first.

This Annual Report addresses some of the compliance review comments.

2016 Minimum Control Measure Summary

The Town of Chester continued to have several Qualifying Local Programs in most of the six Minimum Control Measures.

Minimum Control Measure No. 1 - Public Education and Outreach

The following information is on the Town of Chester website (<http://www.chesterct.org>):

Town Government Tab

Cedar Lake Advisory Committee

Manages and monitors the condition of Cedar Lake

Inland Wetland Agency

Inland Wetlands and Watercourses Regulations

Water Pollution Control Authority

Stormwater Management Map - Urbanized Area (UA)

Restaurant Information Package

Deep River Treatment Plant Water Quality Reports

Sewer Service Area Map

WPCA Sewer Use and Pollution Control Regulations

Town Services Tab

Sanitation

Septic System Care

Town Clerk

Ordinances and Special Acts as of January 28, 2016

Ordinance Concerning Removal of Animal Waste, Adopted at a 12/02/97 Town Meeting

Resolution Regarding Household Hazardous Waste Programs, Enacted 03/02/99

Waste Disposal

Recycling & Bulky Waste Regulations

2016 Household Hazardous Waste and Consumer Electronics Drop-Off Schedule

Transfer Station Fee Schedule

The following was made available to the public in the Town Hall Office Building Lobby:

The pamphlet entitled "*Protecting Water Quality with Vegetated Buffers in the Connecticut River Estuary, a Guide for Homeowners Living near Wetlands and Watercourses*" published by the Tidewater Institute and funded by the Environmental Protection Agency (EPA). The pamphlet contains information on non-point source pollution, riparian buffers and native plants for landscaping.

In 2012 the Midstate Regional Planning Authority (MRPA) merged with the Connecticut River Estuary Regional Planning Agency (CRERPA) to form the Lower Connecticut River Valley Council of Governments (River CoG).

Prior to October 2012 Chester was a member town of the Connecticut River Estuary Regional Planning Agency. In October 2012 the Connecticut River Estuary Regional Planning Agency and the Midstate Regional Planning Agency merged to form the Lower Connecticut River Valley Council of Governments (RiverCOG). Since October 2012 Chester has been a member of The Lower Connecticut River Valley Council of Governments (RiverCOG). RiverCOG is comprised of seventeen towns including Chester, Cromwell, Clinton, Deep River, Durham, East Haddam, East Hampton, Essex, Haddam, Killingworth, Lyme, Middlefield, Middletown, Old Lyme, Old Saybrook, Portland and Westbrook. Twelve of the seventeen RiverCOG member towns are designated MS4s.

Effective July 1, 2017 Haddam will be a New MS4 Permittee which will make a total of thirteen MS4 RiverCOG member towns out of the seventeen member towns.

A stormwater tab may be established on the River COG website www.rivercog.org in 2017 where all of the seventeen members may share the expense and benefits of a stormwater public education and outreach tab on the RiverCOG website.

The following public information is available on the RiverCOG website www.rivercog.org :

Quick Links tab:

2016 Residential Household Hazardous Waste (HHW) Collections and Paper Shredding Events Schedule and Information

Information on the following was also included:

Household Hazardous Waste Accepted
Fluorescent Bulbs and Compact Fluorescent Lamps (CFLs)
Medicines/Drug Disposal
Needles/Syringe/Lancet Disposal
Unacceptable Items for HHW Collection
HHW Collection Day Rules
Identifying HHW
Lawn Care
Mercury
Paper Shredding Events Schedule

Waste Management and Recycling tab:

2016 Household Hazardous Waste and Paper Shredding Schedule
List of Accepted Materials
Map of HHW Collection Site in Essex
Recycling in the RiverCOG Region
Consumer Electronics
RiverCOG Transfer Stations

Environment tab

Land Trust Exchange Information

Minimum Control Measure No. 2 - Public Participation/Involvement

Residents continued to be involved in the Household Hazardous Waste Program, the Recycling Program and the Bulky Waste Program.

Minimum Control Measure No. 3 - Illicit Discharge Detection and Elimination

A meeting was held in the office of Nathan L. Jacobson & Associates, Inc. on December 9, 2015 during which Wade Thomas gave Lauren Gister, First Selectwoman an overview of the CTDEEP MS4 Stormwater General Permit program.

Specific Minimum Control Measures were discussed with particular emphasis on MCM No. 3. Nathan L. Jacobson & Associates, Inc. indicated that while the stormwater outfall mapping was completed in 2007 in the Urbanized Area of Chester (79 MS4 stormwater outfalls were field inventoried with a map grade GPS unit), the MS4 stormwater outfalls throughout the majority of the town were never mapped.

The modified CTDEEP MS4 Stormwater Permit program, effective July 1, 2017, will require that the MS4 stormwater outfall mapping be completed town wide by June 30, 2018.

Nathan L. Jacobson & Associates, Inc. also informed Lauren Gister, First Selectwoman that an Illicit Discharge Detection and Elimination Ordinance has not been enacted. Nathan L. Jacobson & Associates, Inc. forwarded electronic copies of the Town of Durham IDDE Ordinance and the IDDE Citation Hearing Procedure to the two former First Selectmen. . The modified CTDEEP MS4 Stormwater Permit program, effective July 1, 2017, will require that the IDDE Ordinance be completed by June 30, 2018.

Lauren Gister, First Selectwoman indicated that the enactment of an IDDE Ordinance and IDDE Citation Hearing Procedure and completion of the MS4 stormwater outfall mapping would be given importance in 2016.

Nathan L. Jacobson & Associates, Inc. forwarded electronic copies of the Town of Durham IDDE Ordinance and the Town of Durham IDDE Citation Hearing Procedure to Lauren Gister, First Selectwoman on December 9, 2015 for her use in IDDE Ordinance and Citation Hearing Procedure enactment.

It is anticipated that the process of IDDE Ordinance and IDDE Citation Hearing Procedure enactment will be initiated, and completed, in the 2017 calendar year.

Continued to maintain and enforce the Ordinance Concerning Removal of Animal Waste and the Wastewater Management Ordinance.

Lee Vito, Sanitarian, was contacted regarding repairs to subsurface sewage disposal systems that could have a failed leaching system which could potentially drain to the road or any road storm drainage system. None were known to have discharged to inland wetlands, open water, town road drainage systems or roads.

Minimum Control Measure No. 4 - Construction Site Runoff Control

Continued to make applicants aware of the need to register for the *CTDEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities* when the total land disturbance is five or more acres of land regardless of project phasing when the project requires municipal permitting and one or more acres of land when no municipal permitting is required.

Continued to make recommendations to the land use commissions in land use engineering review letters that proof of registration for the CTDEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities be made a Condition of Approval, where applicable.

Section 7.5e of the Inland Wetland and Watercourses Regulation of the Town of Chester requires that a Soil Erosion and Sediment Control Plan be prepared for any regulated activity. The Soil Erosion and Sediment Control Plan shall include a description of the proposed activity

and proposed erosion and sedimentation controls and other management practices and mitigation measures which may be considered as a condition of issuing a permit for the proposed regulated activity including, but not limited to, measures to (1) prevent or minimize pollution or other environmental damage, (2) maintain or enhance existing environmental quality, or (3) in the following order of priority: restore, enhance and create productive wetland or watercourse resources

Section 9 of the Inland Wetlands and Watercourses Regulations of the Town of Chester allow the Inland Wetland and Watercourses Agency to hold a public hearing on an application if the Agency determines that the proposed activity may have a significant impact on wetlands or watercourses or a petition signed by at least twenty-five persons is received.

Section 40 U - Soil Erosion and Sediment Control Plan of the Zoning Regulations requires that a Soil Erosion and Sediment Control Plan be submitted when the cumulative disturbed area of a subdivision development exceeds one-half acre.

Section 55 - Erosion and Sediment Control Plan of the Zoning Regulations, and Section 4.4.5 - Sedimentation and Erosion Control Plan of the Subdivision Regulations, lists the specific requirements of the Soil Erosion and Sediment Control Plan.

Section 3.11.2 Separate Sedimentation and Erosion Control Bond of the Subdivision Regulations requires that a separate cash or savings account bond be posted to ensure that the measures and facilities as shown on the Soil Erosion and Sediment Control Plan are installed and maintained. The bond must be posted prior to any work on the approved subdivision. In the event of failure of the developer to maintain proper soil erosion and sediment control measures on the site the town has the authority to use the bond to correct the soil erosion and sediment control on the site.

The minimum acceptable standards for a Soil Erosion and Sediment Control Plan shall be as contained in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control and further requires that soil erosion and sedimentation shall be minimized during construction, that the development does not cause off-site erosion and/or sedimentation and that the site is stabilized and protected from erosion when completed.

Retained Nathan L. Jacobson & Associates, Inc. to review Subdivision Plans, Site Development Plans and Soil Erosion and Sediment Control Plans; and to conduct construction site inspections of subdivision road construction and driveway construction. Nathan L. Jacobson & Associates, Inc. has a Certified Professional in Erosion and Sediment Control (CPESC) on staff.

Minimum Control Measure No. 5 - Post-Construction Site Runoff Control

The Chester Road Regulations, Section 90, Drainage Design Criteria contains the following requirements:

90A.1 General

Proposed drainage facilities shall be designed to accommodate surface runoff from proposed land development as well as the entire upstream drainage area and to protect wetlands, watercourses and water bodies from the adverse impacts of post construction stormwater runoff.

90A.3 Potential Overload

Where the proposed land development, including roadway and drainage facility construction, is likely to cause an increase in the rate of stormwater runoff such as to hydraulically overload or cause damage to existing downstream drainage structures, facilities, or watercourses, and/or cause flooding which would likely result in physical damage of land and improvements adjacent thereto, adequate stormwater runoff control measures shall be designed and constructed to prevent or alleviate such harmful effects.

90A.4 Stormwater Runoff Control

Where stormwater runoff control measures are required by the Commission, they may include, but not be necessarily limited to, retention and/or detention with controlled release of increased flows, increasing the hydraulic capacity of downstream drainage facilities, erosion protection measures, stormwater treatment or any combination of the above.

90A.5 Stormwater Quality

Best Management Practices shall be used to enhance the removal of both particulate and soluble pollutants during storm events so as to improve the quality of stormwater runoff discharged to receiving waters. In this regard, the applicant shall contact the Town Engineer for specific guidance on which Best Management Practices are to be required.

90A.6 Stormwater Detention

When stormwater detention facilities are required, they shall be sized such that the peak discharge after development shall not exceed the peak discharge prior to development for each of the storm frequencies identified in Section 90A.2. Design and construction of surface stormwater detention facilities shall conform to the requirements for "Detention Basin" as outlined in the "Connecticut Guidelines for Soil Erosion and Sediment Control". To the maximum extent possible, detention basins shall be designed as extended detention ponds or wet ponds, or used in conjunction with other stormwater treatment practices to provide water quality benefits; shall be designed and landscaped so as to enhance the appearance of the surrounding environment; and, to minimize future maintenance. All detention basins shall be readily accessible for maintenance purposes via an improved access drive.

90A.10 Existing Watercourses

All activities that are regulated by the Wetlands Commission shall be accomplished in such a way as to minimize the effects which would be adverse to the regimen of such watercourse.

Adequate provision shall be made to prevent or minimize scour or erosion in the adjacent upstream and downstream reaches of the watercourse.

Section 5.10, Storm Water Runoff of the Subdivision Regulations requires storm drainage to be designed and constructed to be capable of accommodating all additional runoff which can be reasonably expected to result from future development of the upstream drainage area. Due consideration shall be given to minimizing disruption of existing drainage patterns. The Subdivision Regulations also requires all drainage systems to comply with the Chester Road Regulations, Section 90, Drainage Design Criteria.

Retained Nathan L. Jacobson & Associates, Inc. to review stormwater management plans. Nathan L. Jacobson & Associates, Inc. has a Certified Professional in Storm Water Quality (CPSWQ) on staff.

Minimum Control Measure No. 6 - Pollution Prevention/Good Housekeeping

The town subcontracted Petrucelli Construction LLC to perform the catch basin and storm manhole cleaning. All of the town owned catch basin and storm manholes were cleaned starting in early June and completed in late October.

The Town of Chester contracted the Town of Deep River to provide a Pelican[®] Street Sweeper and Operator to conduct pavement sweeping on all roads town wide over a two to three week period from the middle of May to early June. All town roads, school parking lots and municipal building parking lots were swept. Pavement sweeping was also conducted in Chester Town Center on an as needed basis from May through October.

Stormwater Sampling

One (1) round of six (6) stormwater samples was obtained on November 15, 2016 from two (2) outfalls located in an Industrial Zone, two (2) outfalls located in a Commercial Zone and two (2) outfalls located in a residential zone to fulfill the MS4 stormwater sampling requirements for calendar year 2016.

The MS4 stormwater outfall sampling sites are further described as follows:

C1 Commercial Zone N 41.40269° W -72.44933°
Main Street - 15" RCP Outfall in Retaining Wall to Pattaconk Brook
Drainage Basin No. 4017 - Chester Creek

C2 Commercial Zone N 41.40278° W -72.45064°
Village Main Street Inlet to Catch Basin
Drainage Basin No. 4017 - Chester Creek

I1 Industrial Zone N 41.40713° W -72.43155°
Railroad Avenue Outfall to Chester Creek Overlook
Drainage Basin No. 4018 - Deep River

I2 Industrial Zone N 41.39948° W -72.47047°
15" Diameter RCP Outfall to Pattaconk Brook from Inspiration Lane
Drainage Basin No. 4017 - Chester Creek

R1 Residential Zone N 41.42244° W -72.45862°
15" Diameter RCP North of High Field Lane
Drainage Basin No. 4000 - Connecticut River

R2 Residential Zone N 41.40067° W -72.50147°
Cedar Lake Road Outfall from Lakeview Avenue to Cedar Lake
Drainage Basin No. 4017 - Chester Creek

Rainfall for the November 15, 2016 event was reported to range from a minimum of 0.25" to a maximum of 0.56" at the six National Weather Service NOAA weather stations.

The previous rainfall event of 0.10" or greater occurred on October 30, 2016.

The MS4 Stormwater Monitoring Report Forms for the November 15, 2016 stormwater sampling event were hand delivered to Lauren Gister, First Selectman of the Town of Chester, on December 20, 2016 for signing and dating of the forms. The signed and dated Stormwater Monitoring Report Forms were scanned to pdfs.

The signed and dated pdfs of the Stormwater Monitoring Report Forms were forwarded to CTDEEP MS4 Stormwater Permit Coordinator Chris Stone, P.E. on December 21, 2016.

Electronic Annual Report Certification Form

The 2015 Electronic Annual Report Certification Forms was forwarded to the CTDEEP on December 21, 2016 as a pdf of the signed and dated form.

It is anticipated that the 2016 MS4 Annual Report Transmittal Form will be forwarded to the CTDEEP in March 2017 along with a hard copy of the 2016 MS4 Annual Report and the \$187.50 Annual Report Review Fee subsequent to meeting FOI requirements.

An electronic copy of the 2016 MS4 Annual Report will be forwarded to the CTDEEP Stormwater Staff in March 2017.